each of which is a two-segmented structure, of which the basal part is a hard, narrow, long plate, ciliate at the margin and bearing a minute, terminal, freely-articulated segment.

The alimentary canal terminates just above the base of these vaginal plates, so that just above the anus is the termination of the genital tube, there being nothing between the two orifices but a little membrane. The genital orifice is membranous, ample, and proceeding forwards very soon divides into two branches, one of which is soon strongly elbowed, and then narrows to form a spiral duct that bears the spermatheca; this is of very remarkable and unusual form, a bent, long tube, with a round head; the duct enters close to the head, and at the same place there is connection with a rather long, tubular gland.

EXPLANATION OF PLATE X.

(*All of the male.*)

FIG. 1. Profile of abdomen.

FIG. 2. Ventral aspect of last segment.

FIG. 3. Connection of dorsal and ventral plates of last segment (diagrammatic).

FIG. 4. Terminal portion of genital tube.

FIG. 5. Last ventral plate, spiculum and terminal portion of genital tube.

FIG. 6. Ædeagus as extraeted, in contracted state.

FIG. 7. Internal sac; approximation to its functional condition of extension: dorsal aspect.

The lettering is uniform throughout, viz.: Numerals, 1–8, dorsal sclerites of abdomen; I–VIII, ventral selerites.

Letters, *a*, strut of last ventral; *b*, anus; *cm 1*, first connecting membrane; *cj*, duct from the testes; *f*, fork of speculum; *fl*, flagellum; *is*, sac; *ml*, median lobe; *ms*, median lobe struts; *s*, spiracle; *sp*, spiculum; *t*, tegmen; *ts*, strut of tegmen; *x*, chitin rod at termination of genital tube.

NEW NORTH AMERICAN SPECIES OF APION.

BY H. C. FALL,

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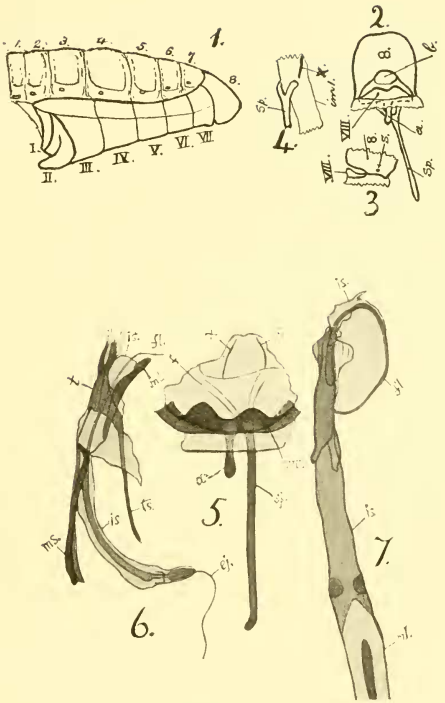
Specimens of an *Apion* bred from galls on *Hibiscus moscheutos* at Arlington, N. J., have recently been sent me for identification by Mr. H. B. Weiss. An examination shows that they can not be re-



Ithycerus.

ferred to any of our previously known species, and at Mr. Weiss' request I give herewith a description of the species in order that it may be properly referred to in his and Mr. Dickerson's paper on *Hibiscus* insects. The opportunity is taken to make known several other new species of *Apion* that have come to hand since my revision of the genus. Single examples, mostly females, of some four or five other apparently new species are in my collection, two of which, from their appearance, I suspect are importations. These must await the turning up of additional specimens, including males, before they can be properly made known.

Apion hibisci new species.

Moderately robust, black, tibiæ and tarsi brownish piceous, pubescence thin, white, somewhat condensed at the base of the third elytral interval. Beak stout, cylindrical, moderately curved, subequal in length to the head and thorax in the male, a little longer in the female, rather densely punctate throughout in both sexes, a somewhat larger elongate puncture over the base of the antennæ; first joint of latter one and one-half (♂) to twice (♀) the length of the second, and not quite reaching the eye. Front subequal in width to the tip of the beak, not sulcate. Prothorax obviously wider than long, sides parallel in about basal three-fifths then rather suddenly narrowed, the apex subtubulate; punctures coarse and moderately close, basal fovea not very conspicuous. Elytra one-third longer than wide, humeri quite broadly prominent, sides nearly parallel in rather more than basal half, intervals flat, one-half to three-fourths wider than the striæ. Metasternum and first two ventral segments moderately punctate, the fifth vaguely more finely so. Length 2.4 to 2.7 mm.

Hab.: Arlington, New Jersey; taken from galls on *Hibiscus moscheutos* by Mr. H. B. Weiss, from whom I have received a good series of specimens.

This species belongs to Section IV of my Synopsis (Trans. Am. Ent. Soc., 1898) and would by the table fall near *attenuatum*, after which it may best be placed; differing by its stouter form, broader thorax, more parellel elytra, more basally inserted antennæ, and paler tibiæ and tarsi. The sexual differences are very feeble, consisting only in the slightly longer beak in the female.

A. albidulum new species.

Form rather stout, black, clothed quite densely with elongate appressed white squamules. Beak slender, cylindrical, slightly longer than the thorax in the male, a little longer but shorter than the head and thorax in the female,

polished and sparsely punctate beyond the basal dilatation, which is distinct in the male, feeble in the female. Antennæ inserted near the base, the first joint almost reaching the eye. Thorax not quite as long as wide, sides moderately rounded behind the middle, slightly sinuate before the base, punctuation moderate but largely concealed by the vestiture. Elytra nearly twice as wide as the thorax, not more than one-fifth longer than wide, sides distinctly divergent to behind the middle, intervals apparently flat, much wider than the striæ. Body beneath and legs densely squamose. Length 2 to 2.2 mm.

Hab.: California. Described from a single pair (type ♂) communicated by Mr. E. P. Van Duzee, taken at Coachella, Riverside Co., and a single specimen from Palm Springs (collected by Hubbard) erroneously placed with *varicorne* in my collection. The middle and hind tibiæ of the male are armed at tip with a moderately long mucro which bears a denticle beneath. This species is to be associated with *propinquicorne* and *modestum,* the latter of which it should follow. It is much more densely and coarsely squamose than *modestum* and is withal a larger and stouter species. Superficially it more nearly resembles *propinquecorne,* but the latter has a finer and less dense vestiture and a slightly longer undilated beak with more basally inserted antennæ. Superficially also it resembles quite strongly the densely squamose form of *varicorne* which occurs in the same region, but this latter belongs to an entirely different section of the genus.

A. eccentricum new species.

Very similar in form, size, and general aspect to *griseum.* Black, pubescence conspicuous but not dense except on the sternal side pieces. Beak (♂) as long as the head and thorax, a little thicker at the middle as viewed from the side, slightly dilated at the antennal insertion, polished and sparsely finely punctate apically, more closely so at sides; ♀ longer than the head and thorax, a little more slender and scarcely dilated. Antennæ rather distant from the base of the beak, first joint subequal to the next three, the third attaining the eye. Front scarcely to feebly sulcate. Prothorax a little wider than long, sides arcuate medially, moderately constricted in front, sinuate before the basal margin, which is evidently expanded; punctuation rather close, basal fovea present. Elytra about one-third longer than wide, sides subparallel or feebly divergent basally in the male, more evidently diverging posteriorly in the female. Punctuation beneath moderate. Length 2 to 2.2 mm.

Hab.: Arizona (Santa Rita Mts., Clemence; Huachuca Mts., Slevin). The type is a male from the first named locality.

In addition to the sexual rostral differences, the males have the middle tibiæ armed with a simple acute apical mucro, the front and

hind tibiæ unarmed; the tibiæ in the female are unarmed as usual and the femora are noticeably more slender than in the male.

The presence of a terminal mucro on the middle tibiæ only is a unique character thus far in the genus, but it occurs again in the following species.

This species should follow *griseum,* and may most certainly be distinguished from it and allies by the peculiar male tibial armature.

A. brunnicornis new species.

Similar in most respects to the preceding species, notably so in having the middle tibiæ alone of the male mucronate. It differs from *eccentricum* as follows. Size obviously smaller; beak shorter and stouter in the male, shorter than the head and thorax, and more evidently thickened medially when viewed in profile; antennæ brownish testaceous, basal joint less elongate, the second joint reaching the eye; tibial mucro curved inward a little at tip, not so in *eccentricum.*

In the female the beak is also stouter, and is a little more strongly curved than in the same sex of *eccentricum.*

The femora are more slender in the female than in the male as in *eccentricum.*

Length 1.6 to 1.9 mm.

Hab.: Arizona. Chiricahua Mts. Collected by H. G. Hubbard.

This species is definitely separable from all others except the preceding by the peculiar male tibial armature and from that by the color of the antennæ, in itself a very unusual character.

A. eriogoni new species.

Very closely related, and extremely similar to *ventricosum,* but averaging a little smaller, and slightly less ventricose than the latter. The pubescence is a little better developed than in *ventricosum,* and the beak is evidently longer and more slender, being as long as the head and thorax in the male, and a little more elongate in the female. The elytral interspaces are, as a rule, a trifle wider and flatter in *ventricosum.* Length 1.4 to 1.55 mm.

Hab.: Arizona. Described from two males and two females taken by Dr. E. A. Schwarz on *Eriogonum* at Oracle and in the Santa Rita Mts., June 5–30. The type a male from the first named locality.

Ventricosum occurs abundantly on *Prosopis* in the Southwest.

A. frontellum new species.

Moderately robust, black, with grayish aspect, due to the dull lustre and white appressed hairs which, though sparse, are somewhat conspicuous. Beak